## REMARKS

This Application has been carefully reviewed in light of the Final Office Action mailed on March 26, 2008 ("Office Action"). Claims 1-3 and 5-31 are pending in the Application and stand rejected.[1] Claims 1, 3, 8, 25, and 29-31 have been amended. Applicants respectfully request reconsideration and favorable action in this case.

## Section 101 Rejections

The Office Action continues to maintain the rejections of Claims 1-3 and 5-31 under 35 U.S.C. § 101 for containing nonstatutory subject matter. Applicants traverse the § 101 rejections maintained from the prior Office Actions,[2] and respectfully submit that the rejections are improper. Indeed, Applicants respectfully note that the Office Action appears to ignore previous claim amendments made, which satisfied the statutory test outlined in the M.P.E.P. As Applicants previously submitted, the M.P.E.P. makes clear that "a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory." M.P.E.P. § 2106.01(I). In accordance with the M.P.E.P.'s instruction, Claim 1 recites "software comprising instructions stored in a computer readable medium."

Moreover, the § 101 rejections are improper in light of the express wording of the M.P.E.P. guidelines on the subject of statutory subject matter. For example, the M.P.E.P. instructs that the correct procedures to follow when determining if a claimed invention meets § 101's requirements include ensuring that "the claims define statutory subject matter (i.e., a

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[1] The Office Action indicates that Claims 1-31 are pending. Applicants respectfully note that Claim 4 was cancelled by previous amendment.

[2] For example, Applicants previously noted that prior Office Actions, like the current Office Action, improperly suggested that the Application fails to disclose any utility or practical application. Particularly, Applicants submitted that the Office Action improperly suggested some limiting language (i.e., mining operations, retail sales, healthcare) that could be used to demonstrate utility. Applicants continue to reject this approach because the permissive language merely demonstrates the breadth of the utility, not the supposed lack of such utility. Regardless, Applicants respectfully assert that the claims are directed to a useful and practical application and that one of ordinary skill in the art would recognize the specific and practical utility upon viewing the claims. It is well known that an "invention has a well-established utility if (i) a person of ordinary skill in the art would immediately appreciate why the invention is useful based on the characteristics of the invention (e.g., properties or applications of a product or process), and (ii) the utility is specific, substantial, and credible." M.P.E.P. § 2107(II)(A)(3). Based on the foregoing, the invention, which is defined in the claims, has a well-established and immediately apparent utility.

process, machine, manufacture, composition of matter, or improvement thereof)." M.P.E.P. § 2107(II)(A)(2). As shown above, example Claim 1 defines statutory subject matter, namely, "software comprising instructions stored in a computer readable medium." Further, the M.P.E.P. instructs that "[i]f the applicant has asserted that the claimed invention is useful for any particular practical purpose (i.e., it has a 'specific and substantial utility') and the assertion would be considered credible by a person of ordinary skill in the art, . . . a rejection based on lack of utility [should not be imposed]." *Id.* § 2107(II)(B)(1). The present Application indicates, for example, that a "'business solution' addresses or resolves internal and external business issues, and as a result, ***promotes growth and success of a business enterprise***." Application at [0003]. Applicants respectfully submit that such a practical purpose, namely, promoting growth of a business enterprise by resolving issues encountered by the enterprise, satisfies the M.P.E.P. and § 101's requirement for a "practical purpose."

Regardless of the Application's disclosure, the previous amendments made to independent Claims 1, 25, and 29 further provide for a practical application with a useful, concrete, and tangible result. The patent laws define patentable subject matter as "any new and useful process, machine, manufacture or composition of matter, or any new and useful improvement thereto." 35 U.S.C. § 101. When an abstract idea is reduced to a practical application, the abstract idea no longer stands alone if the practical application of the abstract idea produces a useful, concrete and tangible result and satisfies the requirements of 35 U.S.C. § 101. *See In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994); *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1375 (Fed. Cir. 1998); *AT&T Corp. v. Excel Comm. Inc.*, 172 F.3d 1352, 1357 (Fed. Cir. 1999) (stating that as technology progressed, the C.C.P.A. overturned some of the earlier limiting principles regarding § 101 and announced more expansive principles formulated with computer technology in mind). *See also In re Musgrave*, 431 F.2d 882 (C.C.P.A. 1970) (cited by the Federal Circuit in *AT&T Corp.*, 172 F.3d at 1356). Indeed, a method or process remains statutory even if some or all of the steps therein can be performed in the human mind, with the aid of the human mind, or because it may be necessary for one performing the method or process to think. *See In re Musgrave*, 431 F.2d at 893. Thus, producing a useful, concrete, and tangible result is the key to patentability according to *State Street* and other applicable case law. Applicants respectfully submit that, for example, Claim 1

produces a useful, concrete, and tangible result via "persisting the modified business solution for subsequent presentation through a graphical user interface."

Based on the foregoing, and for additional reasons provided in previous responses and those clearly apparent, Applicants respectfully request that the rejections of Claims 1-3 and 5-31 under § 101 are improper and should be withdrawn.


## Objections to or Rejections Based on Permissive Language

The Office Action notes the use of permissive language such as the word "may," in describing certain aspects of the subject matter within the specification with regards to the § 101 rejections. *See* Office Action at 5 ("Per paragraph [0003], the invention 'may involve technology such as a computer system and software.' Meaning it 'may' [be] something else."). The implicit suggestion in the Office Action that the specification must make clear "the metes and bounds of what applicant considers unique to the invention" is inappropriate. The use of this term in the specification merely indicates that the described embodiments serve as examples – it is the claims that set forth the "invention."[3] Claim 1, for example, recites "a business solution management system comprising software comprising instructions stored in a computer readable medium," thereby setting forth "metes and bounds" of what these Applicants consider unique to their invention. Applicants respectfully request the withdrawal of any objection to the use of such permissive language within the specification, as well as the rejection of Claims 1-3 and 5-31 under § 101 to the extent such permissive language in the specification forms the basis of these particular rejections, or indeed any other rejection.


## Section 112 Rejections

The Office Action withdraws the previous written description rejections under 35 U.S.C. § 112, ¶ 1. *See* Office Action at 37. Claims 1, 3, 7, 15, 20, 21, 25, and 28-30 currently stand rejected for allegedly failing to comply with the enablement requirement of § 112, ¶ 1. The test for enablement is whether "one reasonably skilled in the art could make or use the invention

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[3]  For example, the term "may" has been used in the present Application in the same manner as in numerous issued patents; *see e.g.*, U.S. Patent No. 6,339,832 to Bowman ("*Bowman*") at 2:25-27 ("In an aspect of the present invention, a typical response and a last resort response *may* be listed in the exception response table.") (emphasis added). If the Examiner would like to see additional examples of such issued patents, these can be provided.

from the disclosures in the patent coupled with information known in the art without undue experimentation." M.P.E.P. § 2164.01 (quoting *U.S. v. Telectronics, Inc.*, 857 F.2d 778, 785 (Fed. Cir. 1988)). Applicants respectfully submit one of ordinary skill in the art could make and use the invention claimed and described in the present Application without undue experimentation, as set forth above.

With regards to the seven factors pertaining to undue experimentation, *see* M.P.E.P. § 2164.01(a), the Office Action first improperly limits the breadth of the claims by suggesting examples of business solution management systems directed to "manufacturing processes or solving abstract problems such as an algorithm for solving N-P complete problems." Office Action at 3. Such examples are neither recited in the claims nor required by the applicable patent laws or M.P.E.P. Further, the Office Action's determination that there is no nature of the invention, relying solely on the improper § 101 rejections, is incorrect, as is the improper characterization of the present claims, namely, the Office Action's statement that "finding a solution" is connected to "technology objects." *Id.* Claim 1, for instance, recites "software comprising instructions stored in a computer readable medium . . . *allowing a user to design a business solution with* user parameters, instantiated user-selectable, pre-defined business objects, and *instantiated user-selectable, pre-defined technology objects*."

Regarding "technology objects," the Office Action suggests that there is "no explanation what is a 'technology object.'" Office Action at 3. Applicants respectfully disagree. For example, the present Application indicates that:

> All components, business processes, and technology solutions within the BSM system 101 may be constructed in an object-oriented concept. For instance, the BSM system 101 may implement a question and answer process represented by instances of an object type that are defined as "parameter objects" (described below). Business components of a solution development effort may be defined as "business object" types, as described below with reference to Business Process Object Management 522 in Fig. 5B. Similarly, technology components utilized in the BSM system 101 may be implemented as instances of a "technology object" type. The complete object orientation of the BSM system 101 may achieve maximum flexibility and reusability of all objects in the BSM system 101.

Application at [0053]. *See also* Fig. 1. Applicants respectfully submit that based on the above-quoted portion of the Application as just one example, those of ordinary skill in the art would

understand "technology object" as this term is used within "an object-oriented concept," as noted in the specification and claims.

The Office Action further asserts that "[s]ince there is no specific domain in which the invention can be employed, there exists no specific level of predictability in the art." Office Action at 3. Applicants respectfully assert that this particular contention ignores the language of the present claims and the disclosure within the Application. For instance, Applicants describe Figure 1 as a:

> a block diagram of a business solution management (BSM) system 101, which includes software and non-software business solution components. Software business solution components may include an applications/services platform 100 and an integration platform 110. The applications/services platform 100 may include services 102, applications 104, databases 106 and a data warehouse 108. The integration platform 110 may include portals 112, exchanges 114 and application servers 116. Non-software business solution components may include hardware and networks 120, business knowledge 126, solution consulting 128, technology knowledge 132 and business collaboration partners 134. The hardware and networks 120 may include architecture 122 and infrastructure 124.

Application at [0052]. *See also* Fig. 1. The embodiment of the invention described with reference to Figure 1, therefore, includes "software and non-software," including, databases, servers, networks, as well as intangible components such as business knowledge and technology knowledge. That Claim 1, or indeed any claim in the Application is not (unnecessarily) limited to a single domain in which the invention can be deployed or employed does not indicate that there is no level of predictability in the art, but merely the flexibility and applicability of the invention. Further, the embodiment of the invention described above does not relate to an unpredictable art (*e.g.*, chemistry or physiology) but to "software and non-software." "The more that is known in the prior art about the nature of the invention, how to make, and how to use the invention, and the more predictable the art is, the less information needs to be explicitly stated in the specification." M.P.E.P. § 2164.03. Moreover, a "single embodiment may provide broad enablement in cases involving predictable factors, such as mechanical or electrical elements." *Id.* (citing *In re Vickers*, 141 F.2d 522, 526-27 (C.C.P.A. 1944)).

The Office Action further suggests that there "exists no working examples within the specification which clarifies [sic] how 'technology objects' are to be employed." Office Action

at 4. Notwithstanding that the M.P.E.P. expressly instructs that "[t]he specification need not contain an example if the invention is otherwise disclosed in such manner that one skilled in the art will be able to practice it without an undue amount of experimentation," M.P.E.P. § 2164.02 (citing *In re Borkowski*, 422 F.2d 904, 908 (C.C.P.A. 1970)), Applicants respectfully suggest that the Office Action ignores portions of the Application that provide examples of the employment of "technology objects." As noted above:

> all components, business processes, and technology solutions within the BSM system 101 may be constructed in an object-oriented concept. For instance, the BSM system 101 may implement a question and answer process represented by instances of an object type that are defined as "parameter objects" (described below). . . . [T]echnology components utilized in the BSM system 101 may be implemented as instances of a "technology object" type.

Application at [0053]. *See also* Fig. 1. In other words, the embodiment of the invention described in the above-quoted text and related figure clearly indicates that in accordance with "an object-oriented concept," components of the business solution management system, including technology components and solutions, may be instantiated as "technology object" types in order to describe such components and solutions.

The Office Action further asserts that "[s]ince there are numerous applications in which the invention could be used the amount of experimentation would be enormous." Applicants explicitly traverse this holding and submit that the Office Action appears to confuse the breadth of *applications* an invention *may be used for* with the test for enablement: whether the disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention. *See* M.P.E.P. § 2164.01. Indeed, that an invention such as a business solution management system may be used in a multitude of applications does not indicate a need for "enormous" experimentation for such uses and the Office Action fails to show any application for which undue experimentation would be necessary, to say nothing of "enormous" experimentation. Moreover, "[a]s long as the specification discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the entire scope of the claim, then the enablement requirement of 35 U.S.C. 112 is satisfied." M.P.E.P. § 2164.01(b) (citing *In re Fisher*, 427 F.2d 833, 839 (C.C.P.A. 1970)). Applicants respectfully assert that the present

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Application discloses at least one method of making and using the claimed invention. *See, e.g.,* Application at [0052]-[0088]; Figs. 1-3B.

For at least the foregoing reasons, Applicants submit that the § 112, ¶ 1 enablement rejections to Claims 1, 3, 7, 15, 20, 21, 25, and 28-30 should be withdrawn and those claims be allowed.

## Section 102 Rejection

The Office Action maintains the rejection of Claim 29 under 35 U.S.C. § 102(b) as being anticipated by "UML Distilled: A Brief Guide to the Standard Object Modeling Language" by Fowler ("*Fowler*"). Applicants respectfully reassert the previous traversals to this rejection and all the assertions and holdings therein,[4] because *Fowler* fails to teach, suggest, or disclose each and every element of Claim 29 as required. *See* M.P.E.P. § 2131. Claim 29 has been amended to recite "maintaining and modifying the designed business solution subsequent to implementation of the business solution."[5] The Office Action relies on *Fowler*'s disclosure that "these are objects that are set up and then left alone—they are not modified often, and when they are, we can create them again," *Fowler* at 8, to allegedly show the feature of "modifying" recited in Claim 29. Putting aside for a moment that *Fowler* refers to "objects" and that the Office Action fails to show how these "objects" referred to in *Fowler* disclose or are even analogous to "the designed business solution" of Claim 29, *Fowler* fails to teach or disclose at least this feature of "modifying" in Claim 29, as amended. As Applicants asserted in previous responses regarding this claim, rather than teaching that the business solution may be modified as the Office Action asserts, Fowler indicates that the few objects that are modified are created anew. Claim 29, as amended, makes clear that the "the designed business solution" that is modified is the previously recited business solution that is designed "using the selected business process object, technology object, and user parameters," rather than a new business solution. Thus, *Fowler* fails to teach or suggest this feature of Claim 29, as amended.

Moreover, as Applicants noted previously, *Fowler* fails to teach additional features of

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[4]   Further, Applicants reassert the previous responses to the various references in the prior Office Actions.  
[5]   Applicants respectfully submit that the amendment to Claim 29 does not change the scope of the invention as claimed, but merely clarifies such scope.

Claim 29 that were present before this claim was amended in the current response. For example, the Office Action fails to show that *Fowler* teaches or suggests "prompting the user to select at least one instantiated business process object and one instantiated technology object," as recited by Claim 29. The Office Action relies on *Fowler's* disclosure of a "structural feature" and a "behavioral feature" to reject the claimed instantiated technology object and instantiated business process object, respectively, *see* Office Action at 7, even though *Fowler* generally describes the Unified Modeling Language (UML) and its capabilities. *See generally Fowler*. Accordingly, there is no indication in *Fowler* that these "features" are, in fact, "objects," to say nothing of "instantiated objects." More particularly, *Fowler* describes "structural" and "behavioral features" in the context of a UML meta-model, *i.e.*, a diagram that describes a notation. *See id.* at 4, Fig. 1-1. Applicants respectfully submit that neither the description of the UML meta-model in *Fowler*, nor the figure illustrating such a meta-model, teach or suggest a "business process object" or a "technology object," instantiated or otherwise.[6]

Even further, the Office Action fails to show that *Fowler* discloses the aspect of "prompting the user." The Office Action relies on the disclosure of *Fowler* that "[i]f **you** want to add features, **you** must create a sub-type" to allegedly show this feature. Office Action at 7 (emphasis added). But even assuming that the "you" referred to in *Fowler* is, in fact, a "user" (which Applicants dispute), the Office Action fails to show that any "user" is *prompted* to select anything, to say nothing of *prompted* to select "at least one instantiated business process object and one instantiated technology object."

For at least the foregoing reasons, Applicants respectfully request the rejection of Claim 29 in view of *Fowler* be withdrawn and that this claim and those depending therefrom be reconsidered and allowed.[7]

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[6]  An "instantiated business process object" and an "instantiated technology object" are two distinct aspects of a business solution management system, method, or software, each describing distinct components of the business solution. *See, e.g.*, Application at [0053]. In contrast, Fig 1-1 of *Fowler* appears to indicate that both the "behavioral feature" and the "structural feature" are sub-components of a "feature," *i.e.*, they do not describe distinct components of a business solution (even assuming *arguendo* that *Fowler* teaches or suggests a business solution, which Applicants dispute).

[7]  Applicants respectfully traverse the Office Action's assertion that claims may be interpreted in their broadest reasonable sense. *See* Office Action at 41, ¶ 13. Applicants resubmit that claims must be read in "light of the specification as it would be interpreted by one of ordinary skill in the art." M.P.E.P. § 2111 (quoting *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)). In other words, "[t]he broadest reasonable interpretation

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## Section 103 Rejections

The Office Action maintains the rejections of Claims 1 and 25 under 35 U.S.C. § 103(a) as being unpatentable over *Fowler* in view of U.S. Patent Publication No. 2002/0174005 to Chappel ("*Chappel*"). Applicants again respectfully traverse the rejections and all the assertions and holdings therein. Specifically, *Chappel* fails to account for the deficiencies in *Fowler* described above with regard to certain aspects in amended Claim 1, for instance, that are analogous to those in amended Claim 29. Such deficiencies of amended Claim 1 include, for example, any teaching or suggestion of "instantiated user-selectable, pre-defined business objects," "instantiated user-selectable, pre-defined technology objects," "allowing a user to maintain and modify the user-designed business solution subsequent to implementation of the business solution," and "persisting the user-designed business solution as modified for subsequent presentation through a graphical user interface."[8]

Moreover, the Office Action fails to show that *Chappel* teaches or suggests "a first data repository comprising the instantiated user-selectable, pre-defined business objects" or "a second data repository comprising the instantiated user-selectable, pre-defined technology objects," as recited in amended Claim 1. The Office Action continues to rely on *Chappel*'s source database 140 and rules database 145 to the claimed first and second data repositories, respectively. But *Chappel*'s showing of two databases fails to address the full language of the claimed repositories, namely, "a first data repository comprising the instantiated user-selectable, pre-defined business objects" and "a second data repository comprising the instantiated user-selectable, pre-defined technology objects," as recited by example Claim 1. For example, *Chappel* teaches that the rules database stores "predetermined rules used to process or analyze results from the statistical analysis performed by the software tools." *Id.* Further, *Chappel* teaches that the rules database "may include additional knowledge, facts and assertions, that is [sic] generated by the software tools." *Id.* The Office Action fails to show such rules and/or

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of the claims must also be consistent with the interpretation that those skilled in the art would reach." M.P.E.P. § 2111 (citing *In re Cortright*, 165 F.3d 1353, 1359 (Fed. Cir. 1999)).

[8] Further, Applicants continue to traverse the Office Action's assertion that the "software" of Applicants, as recited in Claims 1 and 25, is equivalent to the Unified Modeling Language (UML). *See* Office Action at 8. As noted above in response to the rejection based on § 102, as well as in previous responses, Applicants submit that UML is not software but a standardized specification language for object modeling used, for example, to create an abstract model of a system.

additional knowledge, facts, and assertions are identical to, or even analogous to "instantiated user-selectable, pre-defined technology objects." Simply put, *Chappel*'s source database is not "a first data repository comprising the instantiated user-selectable, pre-defined business objects" and *Chappel*'s rules database is not "a second data repository comprising the instantiated user-selectable, pre-defined technology objects."

Accordingly, Applicants respectfully request reconsideration and allowance of amended Claim 1 and all claims depending therefrom. Claim 25, as amended, includes certain aspects analogous to Claim 1. Therefore, Applicants respectfully request reconsideration and allowance of Claim 25 and all claims depending therefrom.[9]

Amended Claims 30 and 31 also stand rejected under § 103(a) over *Fowler* in view of *Bowman*. As set forth above, the Office Action fails to show that *Fowler* teaches or suggests each and every element of independent Claim 29 from which Claims 30 and 31 depend. *See* M.P.E.P. § 2131. Further, the Office Action fails to show that *Bowman* accounts for the above mentioned deficiencies in *Fowler* with respect to Claim 29. Therefore, Applicants respectfully request reconsideration and allowance of Claims 30 and 31.

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[9]   Applicants respectfully assert that U.S. Patent No. 6,339,832 to Bowman ("*Bowman*") fails to account for the deficiencies in *Fowler* and *Chappel* with regard to independent Claims 1 and 25.

## CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

If the present Application is not allowed and/or if one or more of the rejections is maintained, Applicants hereby request a telephone conference with the Examiner and further request that the Examiner contact the undersigned attorney to schedule the telephone conference.

Applicants believe that no fees are due. However, if this is incorrect, please charge such fees or credit any overpayments to deposit account 06-1050.

Respectfully submitted,

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